

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): Cell culture apparatus comprising  
a flexible culture chamber, and

a wave induction mechanism, that lifts up between 5 and 50% of the length of the culture chamber and is compatible with large scale up.

Claim 2 (original): Cell culture apparatus according to claim 1, wherein the wave induction system moves from 8 to 20% of the surface area of the lower part of the culture chamber.

Claim 3 (original): Cell culture apparatus according to claim 1, wherein the wave induction mechanism moves part of the lower part of the culture chamber to an angle of 1 to 90°.

Claim 4 (original): Cell culture apparatus according to claim 1, wherein the culture chamber comprises means to circulate air.

Claim 5 (canceled):

Claim 6 (original): Cell culture apparatus according to claim 1, wherein the culture chamber is a flexible plastic bag.

Claim 7 (currently amended): Cell culture apparatus according to claim 1, wherein the culture chamber filling rate is filled from 10 to 80%.

Claim 8 (currently amended): A method for cultivating plant cells, animal cells, or microorganisms, the method comprising the steps of using

providing a cell culture apparatus that comprises a flexible culture chamber, and a wave induction mechanism that lifts up between 5 and 50% of the length of the culture chamber and is compatible with large scale up; and

cultivating plant cells, animal cells, or microorganisms in the cell culture apparatus.

Claim 9 (currently amended): A method for producing biomass cells, embryogenic plant cells, metabolites, secondary plant metabolites and/or recombinant molecules, the method comprising the steps of using

providing a cell culture apparatus that comprises a flexible culture chamber, and a wave induction mechanism that lifts up between 5 and 50% of the length of the culture chamber and is compatible with large scale up to produce biomass cells, embryogenic plant cells, metabolites, secondary plant metabolites and/or recombinant molecules; and

growing biomass cells, embryogenic plant cells, metabolites, secondary plant metabolites and/or recombinant molecules in the cell culture apparatus.

Claim 10 (original): Cell culture apparatus according to claim 1 wherein the wave induction mechanism moves part of the lower part of the culture chamber to an angle of 1 to 25°.

Claim 11 (currently amended): Cell culture apparatus according to claim 1 wherein the culture chamber filling rate is filled from 20 to 40%.